

### ABSTRACT

A control system for a cooling system includes a first sensor for sensing a property indicative of demand for cooling and a controller coupled to the sensor. The controller produces the variable duty cycle control signal in response to the property and causes the compressor and valve to vary a cooling capacity of the cooling system in response to the variable duty cycle control signal. The sensor may sense the pressure, temperature, or both. The valve may be a suction-side pressure regulator or a liquid-side expansion valve of the solenoid or stepper type.